2007 Regional Transportation Plan/Regional Comprehensive Plan White Paper

Security and Emergency Preparedness

March 9, 2007

Preliminary DRAFT

I - Introduction

The Southern California Association of Governments has identified several strategy areas to be developed as part of the 2007 Regional Transportation Plan (RTP). This white paper is intended to stimulate discussion and to gather input.

II. Objectives for 2007 RTP

The continued emphasis on enhancing transportation security is also reflected in the most recent transportation authorization bill, known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users), was signed into law on August 10, 2005. SAFETEA-LU, which authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period from 2005-2009, specifies that Metropolitan Planning Organizations (MPO) such as the Southern California Association of Governments (SCAG) shall conduct a metropolitan planning process that provides for consideration of projects and strategies that will 'increase the security of the transportation system for motorized and non-motorized users'.

In addition, in February 2007, the Federal Highways Administration released a Final Rule related to its interpretation of SAFETEA-LU, noting that the metropolitan transportation planning process should be consistent with the Strategic Highway Safety Plan, and other transit safety and security planning and review processes, plans, and programs, as appropriate.

The Southern California Association of Governments (SCAG) - the federally designated Metropolitan Planning Organization for the six county southern California region that encompasses Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties - is developing a security component for the 2007 Regional Transportation Plan.

III. Background

Southern California is home to significant threats, including earthquakes, wildfires, flooding and mudslides. More recently, terrorism has been added to the threats that the region must prepare against. The unexpected and complex nature of these natural and human-caused incidents requires extensive coordination, collaboration and flexibility among all the agencies and organizations involved in the planning, mitigation, response and recovery.

The interdependency of the jurisdictions and organizations makes regional cooperation and coordination essential to security and emergency preparedness extremely critical. No significant event is truly local, as political boundaries are permeable and local critical infrastructure may serve the entire region. No jurisdiction stands alone. The high-risk, well-resourced municipality may be as dependent on a smaller jurisdiction for support in an emergency as the smaller jurisdiction is on the larger ones.

Also, the complexity of the SCAG region, with a range of potential terrorism targets, presents significant challenges to coordinating and implementing effective homeland security programs
It is important to differentiate between safety and security. For the purposes of this paper, the following definitions are used:

- **Safety** is defined as the protection of persons and property from unintentional damage or destruction caused by accidental or natural events.
- **Security** is defined as the protection of persons or property from intentional damage or destruction caused by vandalism, criminal activity or terrorist attacks.[1]

The Regional Preparedness Goal can be stated as "to achieve and sustain risk-based target levels of capability to prevent, protect against, respond to, and recover from major human-caused or natural events in order to minimize the threat and impact to lives, property and the regional economy."

The Transportation Research Board has classified emergency events that affect transportation agencies into several categories, listed below:

Emergency Events Impacting Transportation Agencies:[2]

Naturally Occurring	**Human Caused**	
	Intentional	Non-Intentional
• Droughts • Dust/Wind Storms • Earthquakes • Electrical Storms • Floods • High Winds • Hurricanes • Ice Storms • Landslides • Naturally Occurring Epidemics • Snowstorms and Blizzards • Tornadoes • Tropical Storms • Tsunamis • Wildfires	• Bomb Threats and Other Threats of Violence • Disruption of Supply Sources • Fire/Arson • Fraud/Embezzlement • Labor Disputes/Strikes • Misuse of Resources • Riot/Civil Disorder • Sabotage: External and Internal Actors • Security Breaches • Terrorist Assaults Using Chemical, Biological, Radiological, or Nuclear Agents • Terrorist Assaults Using Explosives, Firearms, or Conventional Weapons • Theft • Vandalism • War • Workplace Violence	• Accidental Contamination or Hazardous Materials Spills • Accidental Damage to or Destruction of Physical Plant and Assets • Accidents That Affect the Transportation System • Gas Outages • Human Errors • HVAC System Failures or Malfunctions • Inappropriate Training on Emergency Procedures • Power Outages • Software/Hardware Failures or Malfunctions • Unavailability of Key Personnel • Uninterruptible Power Supply (UPS) Failure or Malfunction • Voice and Data Telecommunications Failures or Malfunctions • Water Outages

When a disaster occurs, there is a cascading effect on the infrastructure: transportation, utilities, communications, fuel, and water; the services and delivery systems on which we depend. When one of these critical elements in our support system breaks down, it has a domino effect on other elements. When multiple elements break down, the effect can be crippling. Some of the ways in which the infrastructure can be affected in a disaster or emergency are shown in the tables below.[3]

[1] National Cooperative Highway Research Program Report 525 Volume 3, "Incorporating Security into the Transportation Planning Process" Daniel Dornan and M. Patricia Maier, 2005
[2] National Cooperative Highway Research Program Report 525 Volume 9 "Guidelines for Transportation Emergency Training Exercises" McCormick Taylor Inc. 2006
[3] Federal Emergency Management Agency: **Community Emergency Response Team (IG-317)** ***Student's Guide***

Possible Effects Of Damage To The Infrastructure	
Service	***Effect***
Transportation	• Inability to get emergency service personnel into the affected area. • Inability to transport victims away from the area.
Electrical	• Increased risk of fire and electrical shock. • Possible disruption to transportation system if downed lines are across roads.
Telephone	• Lost contact between victims, service providers, and family members. • System overload due to calls from or to friends or relatives.
Water	• Disruption of service to homes, businesses, and medical providers. • Inadequate water supply for firefighting. • Increased risk to public health if there is extensive damage to the water supply or if it becomes contaminated.
Fuel Supplies	• Increased risk of fire or explosion from ruptured fuel lines. • Risk of asphyxiation from natural gas leaks in confined areas.

Each instance of infrastructure damage may severely restrict the abilities of emergency responders to provide service following a disaster. Some types of damage and their effects on emergency services include:

Possible Effects Of Damage On Emergency Service Providers	
Type Of Damage	***Effect On Emergency Services***
Road	• Inability to assess damage accurately. • Ambulances prevented from reaching victims and/or victims prevented from reaching emergency medical services. • Police prevented from reaching areas of civil unrest. • Fire departments prevented from getting to fires. • Flow of needed supplies is interrupted.
Structural	• Damaged hospitals unable to receive patients. • Increased risk of damage from falling debris.
Disrupted Communication	• Victims unable to call for help. • Coordination of services is hampered.
Fuel Line Damage	• Fire and paramedic services overburdened. • Inability to sustain emergency response and recovery
Disrupted Water Service	• Firefighting capabilities restricted. • Medical facilities hampered.

A continuing, cooperative and collective regional effort will be needed to assist the region in the planning, preparation and response to emergencies, whether caused by natural or human elements. To assist in this effort, this chapter identifies SCAG's potential role and responsibility in regards to Homeland Security, and with respect to other jurisdictions. It describes the current

programs at the Federal, State and local levels; identifies security issues in the transportation infrastructure; and presents policy recommendations and actions for consideration by the SCAG Regional Council.

III. Current Conditions

A number of plans, programs, organizations and infrastructure are in place within the SCAG region to provide safety and security of the regional transportation system for many potential situations. The following sections provide an overall summary of efforts to maintain and increase the safety and security of the region.

Strategic Highway Network

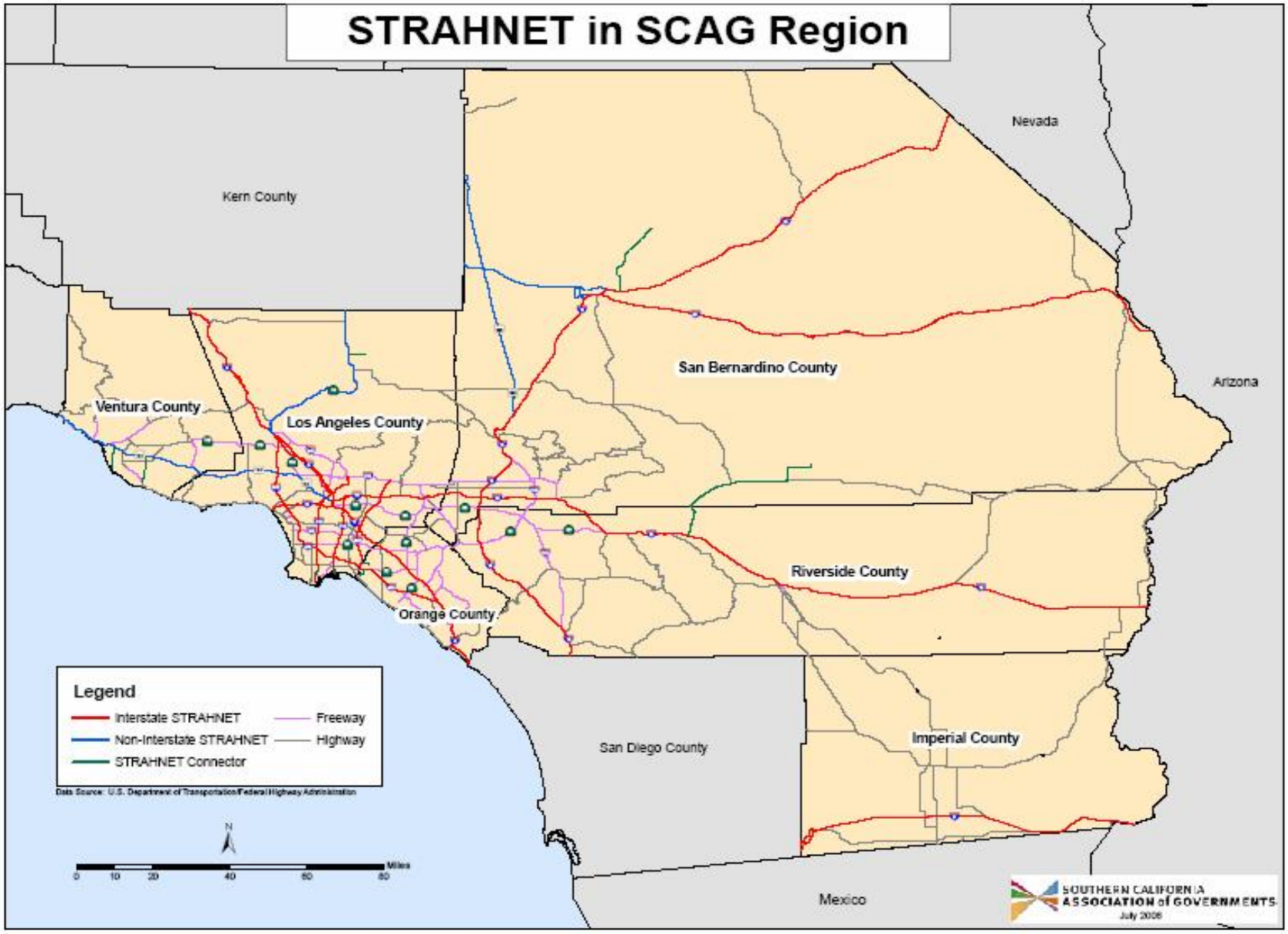
The Strategic Highway Network (STRAHNET) routes within the SCAG region are essential to readily accommodate the movement of military supplies and personnel in times of national emergency. STRAHNET routes include the National Interstate system, as well as key "non-interstate" routes and connectors to ports and military installations.

SCAG, through its planning processes, identifies the operation and maintenance needs of the interstate and state highway system within its jurisdiction, including STRAHNET. Within the SCAG region, all interstates are part of the STRAHNET. Also, SR-14, SR-101 and Route 395 are part of the non-interstate STRAHNET routes. Various connectors between the ports as well as various military installations and STRAHNET are also included. An unclassified visual representation of the STRAHNET within the SCAG region follows on the next page.

There have also been several assessments of the critical state transportation infrastructure, which include identification of the key transportation facilities. Assessments have been conducted by the following bodies:

- The Governor's Office of Emergency Services
- The California Attorney General's Office
- The California Highway Patrol (CHP) conducted a vulnerability assessment of the State's highway system and has issued a confidential report to the State Legislature

The results of these assessments have been shared with the transportation system operators and incorporated into their security planning. However, security considerations have precluded the inclusion or discussion of these critical system elements in public documents.


STRAHNET in SCAG Region
Nevada
Kern County
San Bernardino County
Arizona
Ventura County
Los Angeles County
Riverside County
Orange County
San Diego County
Imperial County
Mexico
Legend
Interstate STRAHNET
Non-Interstate STRAHNET
STRAHNET Connector
Freeway
Highway
Data Source: U.S. Department of Transportation/Federal Highway Administration
N
0 10 20 40 60 80
Miles
SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS
July 2008

United States Department of Defense

The Department of Defense (DOD) has several installations within the SCAG region. In the case of a large scale emergency, the DOD is authorized to provide resources when response and recovery requirements are beyond the capabilities of civilian authorities, and these efforts do not interfere with the DOD's core mission or ability to respond to operational contingencies. Requests for Defense Support to Civilian Authorities (DSCA) are made through the local, county and State authorities as a request for assistance to the federal coordinating official in the appropriate lead federal agency and is normally accompanied by, or submitted after a request from the Governor for a disaster declaration from the President. The Defense Coordinating Officer coordinates the DOD resources to be provided. The California National Guard may be activated as part of the DSCA and can provide law enforcement support, crisis management and consequence management services. Activation of the National Guard for local support during emergencies is done by the Governor via the California Office of Emergency Services.[4]

International Border Crossings

Within the SCAG region, there are two international ports of entry along the Mexico-Imperial County border; Calexico (Calexico and Calexico-East), and; Andrade (near Yuma, Arizona). Traffic from these ports enters California on the I-8 corridor. U.S. Customs and the Border Protection Agency within DHS are charged with the management and control of the official ports of entry. Security planning includes local emergency services as well as the CHP. Caltrans District 11 has initiated the development of a Border Master Plan, to establish a process to institutionalize dialogue among local, state and federal stakeholders in the United States and Mexico. A key objective is to develop criteria that can be used in future studies to coordinate and prioritize projects related to existing and new Ports of Entry (POEs) as well as roads leading to the California Mexico POEs.

The projects will consider operational improvements, design and retrofitting of border crossings, and roadway improvements designed to ease congestion at border crossings. Security is a consideration in the development of the Border Master Plan.

Seaports

The Department of Homeland Security (DHS) has designated the seaports of Long Beach and Los Angeles and Port Hueneme as at risk for potential terrorist actions[5]. Security at the ports is the joint responsibility of the U.S. Coast Guard, the U.S. Customs and Border Protection Agency, federal and state Homeland Security offices, Port police agencies, Harbor Patrols and emergency service agencies. The U.S. Coast Guard leads the local Area Maritime Security Commission which coordinates activities and resources for all port stakeholders.

[4] San Diego Association of Governments, *2007 Regional Transportation Plan White Paper: Public Safety and Homeland Security*, July 21, 2006.
[5] Fiscal Year 2006 Infrastructure Protection Program. U.S. Department of Homeland Security, September 25, 2006.

The Port of Los Angeles is unique in that it has a dedicated police force, the Los Angeles Port Police, to patrol the area within the jurisdiction of the Port of Los Angeles. The Port Police enforces federal, state and local public safety statutes as well as environmental and maritime safety regulations in order to maintain the free flow of commerce and produce a safe, secure environment that promotes uninterrupted Port operations. In addition, the Port Police partners with other law enforcement agencies such as the Los Angeles Police Department, California Highway Patrol, and Customs and Border Protection in the Cargo Theft Interdiction Program (CTIP), which investigates cargo theft, and the High Intensity Drug Trafficking Area, which targets drug trafficking at the Ports of LA and Long Beach. Furthermore, per the Maritime Transportation Security Act of 2002, the Port of Los Angeles works with the Coast Guard to develop security plans for facilities at the port.

Similar to the Port of Los Angeles, security at the Port of Long Beach entails physical security enhancements, police patrols, coordination with federal, state, and local agencies to develop security plans for the port area and investigate suspicious incidents, and obtaining federal funding to pay for these enhancements. As with the Port of Los Angeles, the Port of Long Beach works with the Coast Guard to develop security plans for facilities at the port.

In contrast to the Port of Los Angeles, however, the Port of Long Beach does not have its own dedicated police force. Instead, the Long Beach Police Department is responsible for patrolling the port area. In doing so, the Port reimburses the Long Beach Police and Fire Departments for their port-related activities and expenses. The Port also funds its own Harbor Patrol to supplement law enforcement work conducted by other agencies such as the Coast Guard.

In addition, several programs are in place to effectively monitor and screen seaport cargo. They include:

- Investigations: The federal Container Security Initiative (CSI) directs Customs agents, working with host governments, to inspect and examine all cargo containers deemed high-risk before they are loaded on U.S.-bound vessels. The CSI contains four core elements: Identifying high-risk containers; pre-screening containers before they reach U.S. ports of entry; using technology to pre-screen high-risk containers; developing and using smart and secure containers.
- Inspections: The 24-hour rule requires manifest information on cargo containers to be delivered to U.S. Customs 24 hours before the container is loaded onto a vessel in a foreign port. Customs has the right to stop any container from being loaded, for any reason, while the container is still overseas.
- Partnerships: Most of the largest U.S. importers and their trading partners participate in the Customs-Trade Partnership Against Terrorism (C-TPAT), a public-private partnership designed to improve security standards throughout the cargo supply chain.
- Technology: U.S. Customs uses X-ray, gamma ray and radiation-detection devices to screen incoming cargo at U.S. ports.

Airports

Airport security planning is the joint responsibility of the federal Transportation Security Administration (TSA), the airlines and the individual airports. There are ten airports in the SCAG region offering commercial service, and two offering commuter service. In addition, over 50 general aviation airports in the region are public use, including some of the most active general aviation airports in the country. Airports in the SCAG region have upgraded their security systems since 9/11 using a variety of strategies in conjunction with local, state and federal law enforcement.

In addition, airports serve a vital role in recovery efforts. Airports can serve as evacuation centers, and if in working order after an incident, can serve as staging centers for relief efforts.

California Department of Transportation

Caltrans, in conjunction with the California Highway Patrol (CHP), has created Transportation Management Centers (TMCs) to rapidly detect and respond to incidents while managing the resulting congestion.

With the help of electronic technologies such as electronic sensors in the pavement, freeway call boxes, video cameras, 911 calls, officers on patrol, Caltrans highway crews, ramp meter sensors, earthquake monitors, motorist cellular calls, and commercial traffic reports, the TMC provides coordinated transportation management for normal commutes, special events and incidents affecting traffic.

The TMCs are operated within each Caltrans district. For the SCAG region, Districts 7, 8, 11 and 12 all have TMCs.

California Office of Emergency Services

Homeland security at the state government level in California is primarily handled by the Governor's Office of Emergency Services (OES). As described by the Office of Emergency Services, the role of OES is to 'coordinate overall state agency response to major disasters in support of local government. The office is responsible for assuring the state's readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response and recovery efforts'. The OES serves as the central contact point in the state for any emergency or imminent disaster. It coordinates the notification of appropriate state administering agencies that may be required to respond, as well as coordinates the emergency activities of all state agencies in the event of an emergency.

In doing so, the OES does not focus on port security specifically, but rather more broadly on addressing all potential incidents that could impact the state, such as earthquakes, fires, floods, and terrorist attacks. Furthermore, OES coordinates with federal agencies such as the Department of Homeland Security and Federal Emergency Management Agency, as well as other state and local agencies such as the California Highway Patrol.

In May 2005, the OES released the 2005-2010 Statewide Emergency Management Strategic Plan, which outlines California's vision, mission, and principles for emergency management, as well as goals and objectives for the period 2005-2010. In addition to the strategic plan, OES has released a local planning guide on terrorism, which provides guidance to local cities in planning for terrorist acts.

The OES is required to develop model guidelines for local government agencies and community based organizations to develop a (voluntary) disaster registry program for those who are disabled, elderly, long-term and community health facilities. Persons registered should be prepared to be self-sufficient for at least 72 hours.[6]

Multi-Hazard Mitigation Plans

Mitigating hazards before the occurrence of a disaster is the first step in preparing for emergencies, rather than the final step in recovery. The goal of hazard mitigation plans is to guide implementation activities in order to achieve the greatest reduction of vulnerability, which will result in saved lives, reduced injuries, reduced property damages, and protection of the environment.

FEMA is now requiring state and local governments to develop hazard mitigation plans. The Disaster Mitigation Act of 2000 (DMA 2000), Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a mitigation plan that describes the process for identifying hazards, risks and vulnerabilities, identifies and prioritizes mitigation actions, encourages the development of local mitigation and provides technical support for those efforts. "Local Governments" are defined in the DMA 2000 to typically include counties, local municipalities, and tribal governments but can also include other local agencies and organizations, including Councils of Governments, schools and other special districts.

Within the SCAG region, numerous counties and cities have developed hazard mitigation plans. All six SCAG counties and a number of cities within the SCAG region have completed Hazard Mitigation Plans. These plans must be updated every three years.

County Offices of Emergency Services

Counties and cities are the first responders to any security situation and emergency response. These responders include firefighters, police and sheriff department officials, hospitals, ambulance services and transit agencies for evacuation. Public and private agencies combined with various cities and counties make the most use of all available resources in the event of any emergency.

While each city and county has their own security procedures, the policies are generally similar.

[6] http://www.oes.ca.gov/Operational/OESHome.nsf/LevelTwoWithNav?OpenForm&Key=Laws+And+Regulation

Mutual Aid agreements between cities, counties and private organizations help to maximize resources and reduce the human suffering so common in a disaster situation.

Each SCAG county has a department in charge of security and emergency response. These are:

County	Office Information	County	Office Information
Imperial	Office of Emergency Services 1078 Dogwood Road Heber, CA 92249 760.482.2400	Riverside	Office of Emergency Services 4080 Lemon Street, Suite 8 P.O. Box 1412 Riverside, CA 92502-1412 951.955.4700
Los Angeles	Office of Emergency Management 1275 N. Eastern Ave. Los Angeles, CA 90063 323.980.2261	San Bernardino	Office of Emergency Services 1743 W. Miro Way Rialto, CA 92376 909.356.3998
Orange	Office of Emergency Services 2644 Santiago Canyon Road Silverado, CA 92676 714.628.7055	Ventura	Office of Emergency Services 800 South Victoria Ave. Ventura, CA 93009 805.654.2551

National Incident Management System / Standardized Emergency Management System

The National Incident Management System (NIMS) is a tool for states, counties and local jurisdictions to respond to catastrophic events through better communication and coordination.

> *NIMS provides a consistent nationwide template to enable Federal, State, local, and tribal governments and private-sector and nongovernmental organizations to work together effectively and efficiently to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity, including acts of catastrophic terrorism.* [7]

California has a similar management system called the Standard Emergency Management System (SEMS) which is mandated under California Government Code Section §8607(a). State of California Executive Order S-2-05 requires the state to integrate, to the extent appropriate, the NIMS, into the State's Standardized Emergency Management System (SEMS)[8]

The NIMS Integration Center strongly recommends that all elected officials who will be interacting with multiple jurisdictions and agencies during an emergency incident at the minimum take several NIMS courses, at a minimum:

- FEMA IS-700: NIMS, an Introduction[9]
- ICS-100: Introduction to Incident Command System (ICS)[10] or equivalent

[7] http://www.fema.gov/pdf/nims/NIMS_basic_introduction_and_overview.pdf
[8] http://gov.ca.gov/index.php/executive-order/2000/
[9] http://www.training.fema.gov/emiweb/is/is700.asp

(Note: FEMA IS-700 "NIMS, and Introduction" and ICS-100 are used extensively in the development of this section)

All federal, state, local, tribal, private sector and non-governmental personnel with a direct role in emergency management and response must be NIMS and ICS trained. This includes all emergency services related disciplines such as EMS, hospitals, public health, fire service, law enforcement, public works/utilities, skilled support personnel, and other emergency management response, support and volunteer personnel.

The NIMS employs two levels of incident management, depending upon the type of incident.

- The **incident Command System (ICS)**, a standard, on scene, all-hazard incident management system. ICS allows users to adopt an integrated organizational structure to match the needs of single or multiple incidents.
- **Multi-Agency Coordination Systems** are a combination of facilities, equipment, personnel, procedures and communications integrated into a common framework for coordinating and supporting incident management.

ICS has been in use for over 30 years and is used for planned events, fires, earthquakes, hurricanes and acts of terrorism, etc. ICS helps all responders communicate and effectuates logistics.

NIMS requires all emergency plans and SOPs to incorporate NIMS components, principles and policies, to include emergency planning, training, response, exercises, equipment, evaluation, and corrective actions. Chief elected and appointed officials in a community need to be directly involved in these NIMS preparedness elements, especially the elements dealing with exercising community emergency management policies, plans, procedures and resources.

Jurisdictions will be required to meet the FY 2006 NIMS implementation requirements as a condition of receiving federal preparedness funding assistance in FY 2007. However, it is important to recognize that the NIMS is a dynamic system, and the doctrine as well as the implementation requirements will continue to evolve as emergency management capabilities change based on the hazards and threats.

Mutual Aid Agreements (MAA)

Immediately following the 1994 Northridge earthquake, city and county emergency managers in the California Office of Emergency Services (OES) Coastal, Southern, and Inland Regions developed a coordinated emergency management concept called the Emergency Managers Mutual Aid (EMMA) system. EMMA provided a valuable service in the emergency response and recovery efforts at the Southern Regional Emergency Operations Center (REOC), local Emergency Operations Centers (EOCs), the Disaster Field Office (DFO), and community service centers.

The purpose of Emergency Managers Mutual Aid (EMMA) is to support disaster operations in affected jurisdictions by providing professional emergency management personnel.

[10] http://www.training.fema.gov/EMIWEB/is/is100.asp

In accordance with the Master Mutual Aid Agreement, local and state emergency managers have responded in support of each other under a variety of plans and procedures.

The objectives of the EMMA Plan include:

1) Providing emergency management personnel from unaffected areas to support local jurisdictions, Operational Areas, and regional emergency operations during proclaimed emergencies.
2) Providing a system, including an organization, information, and forms necessary to coordinate the formal request, reception, assignment, and training of assigned personnel.
3) Establishing a structure to maintain this document (the Emergency Managers Mutual Aid Plan) and its procedures.
4) Providing for the coordination of training for emergency managers, including Standardized Emergency Management System (SEMS/NIMS) training, emergency management course work, exercises, and disaster response procedures.
5) Promoting professionalism in emergency management.[11]

Rail and Mass Transit Security

Rail and mass transit systems have long been an attractive target for terrorists and criminal actors. According to a RAND Corporation database of worldwide terrorist incidents, between 1995 and June 2005, there were over 250 terrorist attacks worldwide against rail targets, resulting in almost 900 deaths and over 6,000 injuries (excluding the 2005 London attacks).[12] One of these attacks occurred near Hyder, Arizona, where an Amtrak train carrying 300 passengers was intentionally derailed in October, 1995. One person died and 78 were injured.

Since the early 1990s, the California Public Utilities Commission has required that transit agencies operating rail systems prepare a comprehensive System Safety Program Plan (SSPP) that also included a security component.

At the time of the 2004 RTP, all transit agencies had a security and emergency management plan, which detailed how the agency would coordinate with first responder (law enforcement and fire) agencies, their respective County Office of Emergency Services and the statewide Standardized Emergency Management System (SEMS).

Transit agencies that apply for DHS Transit Security Grants Program (TSGP) funds are required to develop a Regional Transit Security Strategy. Several transit agencies within the SCAG region have worked together to develop a regional transit security strategy. A recent rule from the FHWA/FTA requires Metropolitan Planning Organizations, such as SCAG, to be consistent with transit safety and security planning and to review processes, plans and programs, as appropriate.

Regional Transportation Security Study

[11] http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Emergency Managers Mutual Aid Plan/$file/Emma.pdf

[12] Government Accountability Office, Passenger Rail Security: Enhanced Federal Leadership Needed To Prioritize And Guide Security Efforts, Sept. 2005 at 10 (GAO-05-851), *available at* http://www.gao.gov/new.items/d05851.pdf.

SCAG is contracting with a consultant to conduct a regional security needs assessment, to establish relationships between SCAG and local, regional and state security officials, and to help develop the Security Chapter of the next Regional Transportation Plan. In addition they will provide the Intelligent Transportation System (ITS) architecture for the region, with an emphasis on security.

METRANS Transportation Center

The Metrans Transportation Center, which is a joint partnership between the University of Southern California and California State University, Long Beach, is a US Department of Transportation University Transportation Center that was established in 1998 under the Transportation Equity Act for the 21st Century. The mission of Metrans is to 'solve transportation problems of large metropolitan regions through interdisciplinary research, education and outreach'. In doing so, Metrans conducts research in several areas relating to transportation, one of which is safety, security, and vulnerability. Specifically, this area attempts to study safety and security issues such as pedestrian and transit safety, vulnerability of major infrastructure, and safety and risk mitigation.

Intelligent Transportation System

One way to incorporate safety and security into transportation planning is through greater collaboration between transportation planning and operations. Collaboration is particularly critical in metropolitan regions and congested corridors where numerous jurisdictions, agencies, and service providers are responsible for safety, security, and efficiently operating various aspects of the transportation system. Not only are the roadway and transit system operators themselves dependent on the transportation system, but so are police, fire, and medical services; emergency response and homeland security systems; and port authorities.[13]

Collaboration enables regional strategic development of projects and policies that have regional effects on users, including activities such as incident management, advanced traveler information services, public safety/EMS/security, special events, electronic payment services, and performance measures.

Intelligent Transportation Systems are one way method of a collaborative relationship. ITS projects were originally designed to increase transportation efficiency. It was recognized early on that ITS investments may also serve to enhance the safety, security and emergency response capabilities of the region. Such systems may be of assistance in the detection, response and recovery to human-made and natural disasters.

Because the successful operation of ITS projects usually depends upon coordination and communication between different agencies and the systems they operate, it is essential that there be a region-wide "framework for cooperation" to help achieve that coordination and communication in the most cost-effective manner. This framework is the Southern California Regional ITS Architecture. The Southern California Association of Governments (SCAG) has

[13] http://www.tfhrc.gov/pubrds/04nov/02.htm

taken a leadership role in developing the Southern California Regional ITS Architecture for the region.

IV. Potential Role for SCAG

The events of 2001 have resulted in the emergence of homeland security as a public policy field and forcing many metropolitan areas in the country to realize the need for a regionally cooperative and collaborative approach in planning, preparation and response to emergencies, whether caused by natural or human elements.

The increased emphasis on enhancing transportation security is also reflected in the most recent transportation authorization, SAFETEA-LU, which authorizes Federal transportation funding for highways and transit for fiscal years 2006-2010, and specifies that Metropolitan Planning Organizations (MPOs) shall conduct a metropolitan planning process that provides for consideration of projects and strategies that will 'increase the security of the transportation system for motorized and non-motorized users'.

To determine SCAG's role in "homeland security", a model developed by Dr. Michael D. Meyer, Georgia Institute of Technology, was applied. This model evaluates the potential role of an MPO in relationship to various phases of an incident/disaster. As defined by Dr. Meyer, security/disaster incident consists of the following six elements:

- Prevention: Stopping an attack before it occurs; improved facility design; surveillance, monitoring
- Response/Mitigation: Reducing impacts of an attack; evacuation; identifying best routes; effective communication system
- Monitoring: Monitoring and evaluating incidents; surveillance, monitoring, sensing, public information
- Recovery: Facilitating and reconstruction, restoring operation of transportation system
- Investigation: Determination of causes, and responsible parties; security/ police activity
- Institutional Learning: Self-assessment of actions; feedback to prevention element

As defined by Association of Metropolitan Planning Organizations (AMPO), the roles of MPOs in regional planning vary from region to region.

- *Traditional*: System management and operations role in the ongoing transportation planning activities. The primary responsibility for projects rests elsewhere.
- *Convener*: The MPO acts as a forum where operations plans can be discussed and coordinated with other plans in the region, still not responsible for operation and implementation.
- *Champion*: The MPO works aggressively to develop regional consensus on operations planning. MPO planners develop programs and projects and the MPO takes the lead in developing regional agreements on coordinated operations.
- *Developer*: MPO develops regional operation plans and incorporates operations strategies into the transportation plan. System-oriented performance measures would be used to identify strategic operations gaps in the transportation system.

- *Operator*: The MPO would be responsible for implementing operations strategies that were developed as part of the MPO-led planning process.

SCAG, in its role as both a metropolitan planning organization and as a transportation planning agency, can play a lead role in some areas, a minor role in others, or play no role at all. For example, SCAG has almost no role in the investigation aspect of security, only a minor role, as champion, in the recovery phase, but can play a lead role in championing and convening prevention and developing the institutional learning.

The following table illustrates potential roles of an MPO in regards to various phases of an incident based on its type and function. Based on the table, the role of SCAG, because of its traditional role as the MPO for the six-county Southern California region, is best suited to provide a forum where plans and data can be developed and coordinated with other regional planning efforts; and would work towards developing regional consensus; but not be responsible for operation and implementation of plans and programs.

	Possible MPO Role				
Incident Phase	**Traditional Role**	**Convener**	**Champion**	**Developer**	**Operator**
Prevention	●	☑	☑	●	☒
Response/Mitigation	●	☑	☑	●	●
Monitoring/Information	●	☑	☑	●	☒
Recovery	●	☑	●	☒	☒
Investigation	●	☒	☒	☒	☒
Institutional Learning	☑	☑	☑	☑	☑

Not likely Role ☒ **Minor Role** ● **Lead Role** ☑

This does not indicate that SCAG should abdicate its mandated transportation planning functions as a result of a terrorist attack, man-made or natural disaster. As SCAG has no role in implementation, and there are various organizations already responsible for security planning and response, the key goal is to ascertain how SCAG, in its role as the Metropolitan Planning

Organization, can provide benefit, or enhance, the security planning and activities already in place.

SCAG could play a significant role in helping the region coordinate planning in preparation and anticipation of potential future incidents; and coordinate public information dissemination strategies.

Potential Goals

An overall goal/objective for SCAG can include the amending of an existing SCAG goal to encompass security:

- Ensure ~~travel~~ **transportation** safety, **security** and reliability for all people and goods in the region.

Within SCAG's overall goal are policies. These policies guide SCAG and others in the performance of achieving SCAG's goals and objectives. Although the Security Study is not yet complete, preliminary research has developed **potential** security and emergency preparedness policies. These include:

- Work with local, state and federal agencies to ensure the rapid repair of transportation infrastructure in the event of an emergency.
- Continue to deploy and promote the use of intelligent transportation system technologies that enhance transportation security
- Establish transportation infrastructure and land use practices that promote/enhance security
- Establish a forum where policy makers can be educated and regional policy can be developed.
- Enhance the region's ability to deter and respond to acts of terrorist attacks, man-made or natural disasters through regionally cooperative and collaborative strategies.
- Enhance the Region's capabilities to deter and to respond to unexpected terrorist incidents, human-made or natural disasters by strengthening relationships and coordination with transportation
- Improve the effectiveness of regional plans by maximizing the sharing and coordination of resources which would allow for proper response by various agencies.
- Enhance the capabilities of local and regional organizations including first responders through provision and sharing of information.
- Ensuring the safety of the region's transportation system and infrastructure is a priority.
- Provide the means for collaboration in planning, communication and information sharing before, during, or after a regional emergency for the region.

V. Conclusions

A number of emergency preparedness and response plans are in place for the SCAG region, with its history of earthquakes, wildfires, flooding and mudslides. However, no plan can cover every

eventuality. Eventually, a situation will take place that will overwhelm existing plans and resources. The region must be prepared for that eventuality also.

In SCAGs Transportation Security Study currently under way, a primary objective is to determine what role SCAG, as a Transportation Planning Agency and Metropolitan Planning Organization, can play that will enhance and provide benefit to federal, state and local security and emergency responders, and how can that role benefit the entire region.

The following actions are consistent with the proposed policies listed above, and should be examined further in the development of the 2007 RTP and other security and safety efforts.

- Expand the use of ITS to improve surveillance, monitoring and distress notification systems and to assist in the rapid evacuation of disaster areas.
- Establish transportation infrastructure and land use practices that identify and prioritize the design, retrofit, hardening, and stabilization of critical transportation infrastructure to prevent failure, to minimize loss of life and property, injuries, and avoid long term economic disruption.
- Work with transportation operators to plan and coordinate transportation projects, as appropriate, with Department of Homeland Security grant projects, to enhance the regional transit security strategy.
- Work with local, state and federal agencies to ensure the rapid repair of transportation infrastructure in the event of an emergency.
- Work with local officials to develop regional consensus on regional transportation safety, security, and safety-security policies
- Encourage and provide a forum for local jurisdictions to develop mutual aid agreements for essential government services during any incident recovery
- Develop and incorporate strategies and actions pertaining to response and prevention of security incidents and events as part of the ongoing regional planning activities.
- Map emergency management connectivity/de facto architectures
- Establish a forum for cooperation and coordination of these plans and programs among the regional partners including first responders and operations agencies.
- Develop and establish a regional information sharing strategy, linking SCAG and its member jurisdictions for ongoing sharing and provision of information pertaining to the region's transportation system and other critical infrastructure.
- Work with partner agencies, federal, state and local jurisdictions to improve communications and interoperability and to find opportunities to leverage and effectively utilize transportation and public safety/security resources in support of this effort.

This paper has provided a brief overview of security and emergency response preparation for the region. It is by no means an exhaustive effort delineating every effort at every level. It has shown the balance in place between safety, security and the efficient movement of people and goods the SCAG region.